

ZENON

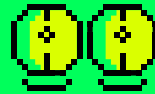
THE NETWORK OF MOMENTUM

This deck was created by the Zenon.Network community.

Some of the concepts presented in these slides are interpretations by the community and are not yet conclusively defined or implemented, and are subject to change pending design and development decisions.

For transparency, slides containing interpretative, undefined, or unimplemented concepts are marked with **Ea-T, the fat alien.**





"As an experienced real estate developer,
the foundation matters a lot to me."



0x3639

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WHAT?

A hybrid PoW & PoS L1 smart contract network with feeless transactions and a **progressive decentralization** path modeled by the **values and ethos of Bitcoin**. While acting as a standalone L1, Zenon will help solve Bitcoin scaling as an L2 enabling a fee and trustless layer 3 zApp economy that inherits Bitcoin's PoW security.

WHO?

Zenon is an entirely community-driven project, built since 2018 by anonymous **cypherpunk veterans** to solve the most fundamental issues of decentralized networks with an unprecedented **dual-ledger / dual-coin network architecture**.

HOW?!

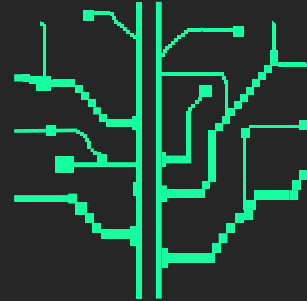
Unlike corporate web3, Zenon achieves true decentralisation through

- An egalitarian, 100% public distribution with a **full BTC refund** for the initial validator set.
- The **decoupling** of coinbase incentives from governance.
- The elimination of transaction fees by **tokenizing network bandwidth** which is rewarded to those who help secure the network.
- **Recycling Bitcoin' PoW** for transaction finality, merge mining, and trustless, **feeless Bitcoin transactions**.



CYPHERPUNK ETHOS

With its egalitarian launch, the community's **"acta, non verba"** credo, and the founding developers' devotion to the cypherpunk ethos of open and merit based contributions, Zenon emulates the culture of the **early Bitcoin community**.



PROGRESSIVE DECENTRALIZATION

xStakes genesis ensured a pure creation of the initial validator set with no insider advantages. The **dual coin economy** also ensures the network validators **continuously decentralize** over time by making them lock up or burn Quasar (QSR).



NETWORK INCENTIVES

The network **rewards** those who help secure it with tokenized, feeless transaction throughput (QSR). It also makes validators choose between maximizing **governance power VS financial gain** and incentivizes good governance through delegation weight.

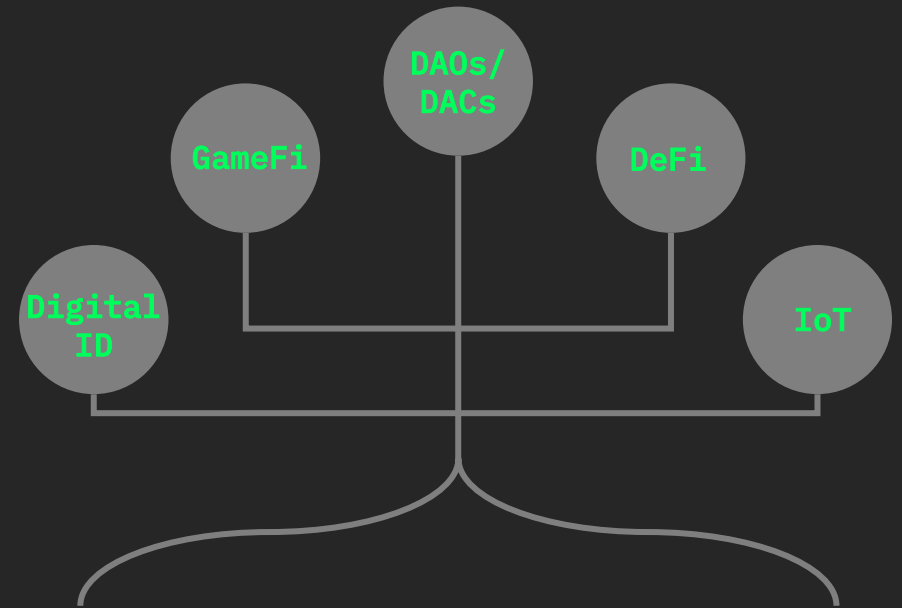


ZENON NETWORK OF MOMENTUM

aims at helping **solve Bitcoin scaling** by **leveraging taproot** while acting as a standalone smart contract L1 that uses **Bitcoin's PoW as root consensus**.

Rather than competing with Bitcoin as the hardest most secure currency, Zenon seeks to complement and **add value to the Bitcoin ecosystem** as a trustless foundation for nested **sidechains** across all use case verticals.

Fee- & Trustless Sidechains for zApps & tokenized asset economies



PoS + PoW
Zenon Momentums



PoW Links >

PoW
Bitcoin Blocks



= Momentum Block

>dual coin economy - znn

ZNN

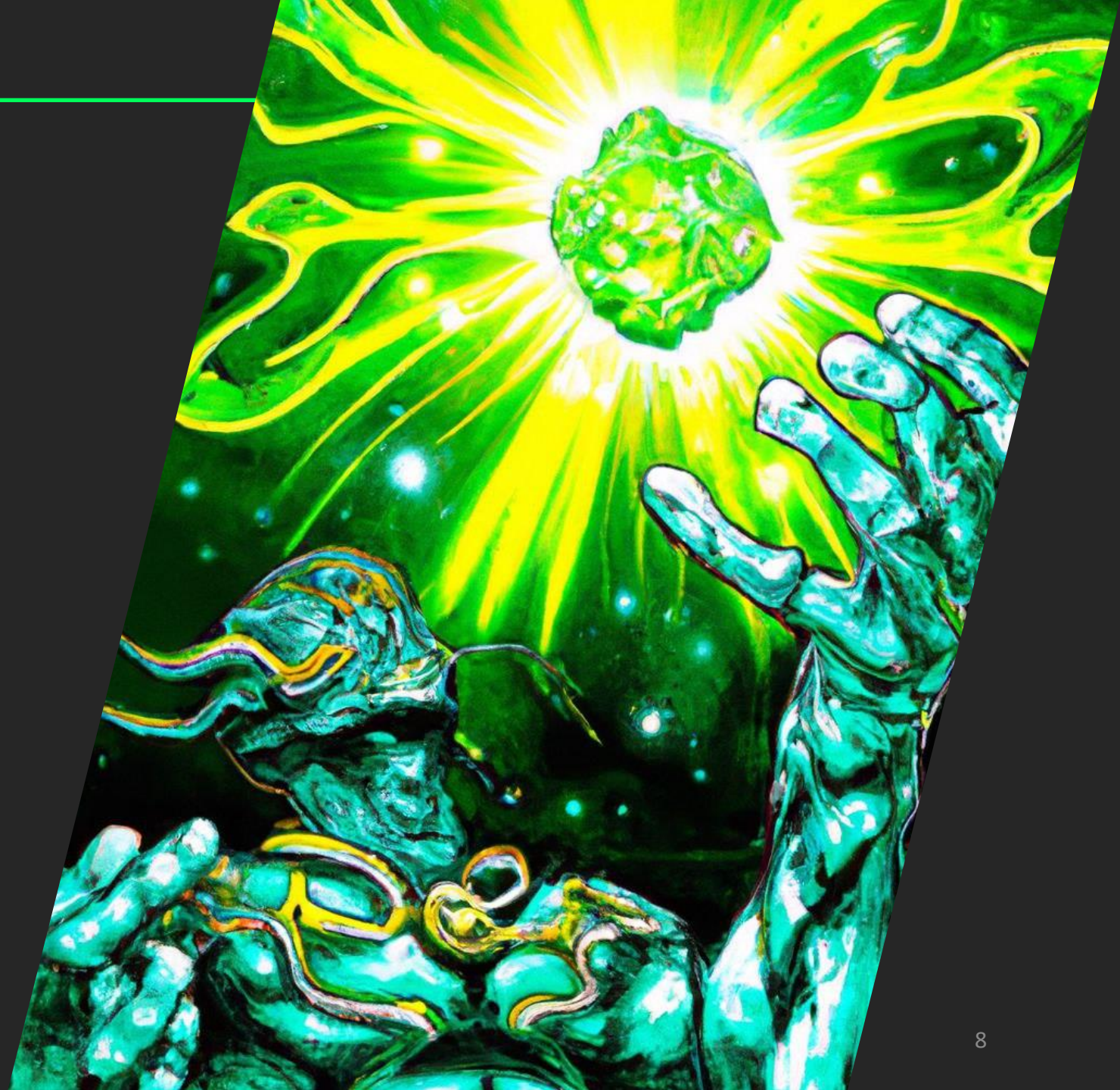
ZENON

NoM's main currency.

Needed to run network consensus infrastructure and participate in protocol emissions.

Secures the network through lock-up by Pillars, Sentinels, and Stakers.

Used by delegators to assign voting power to Pillars and influence their ability to produce Momentums and earn Momentum rewards.





QUASAR

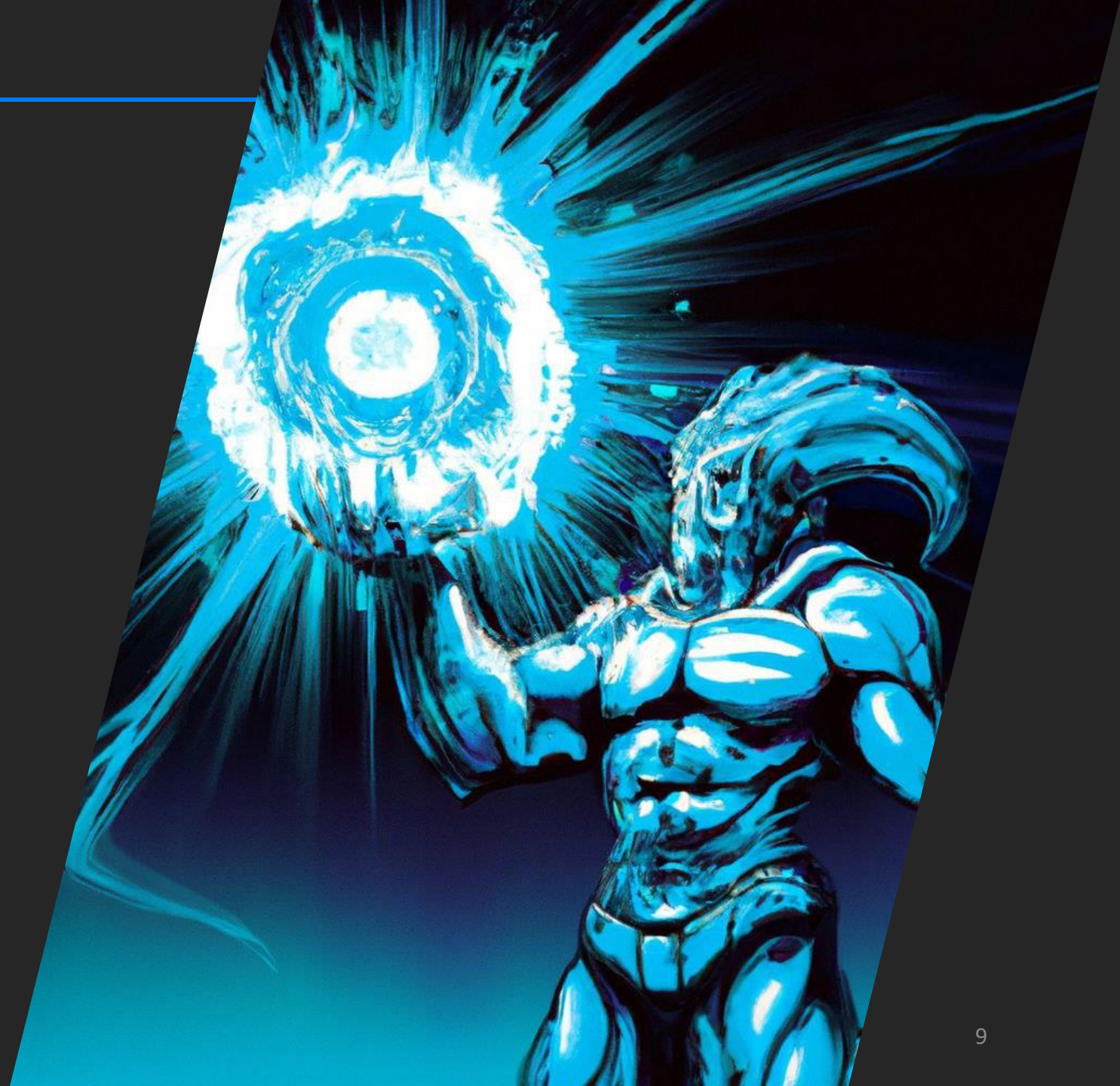
A complementary disinflationary asset of NoM based on a mint & burn equilibrium that enables the feeless mechanism & is used to spawn Pillar or Sentinel nodes.

Tokenizes tx throughput & gives the NoM its feeless properties.

Is used for momentum production by fusing it to Plasma (as alternative to PoW).

Secures the network through burn or lockup by Pillars & Sentinels.

The majority of QSR was distributed to ZNN holders via lock drop based on a pre-Alphanet snapshot.



ZTS

ZENON TOKEN STANDARD

Programmable token standard for any asset on Zenon NoM.

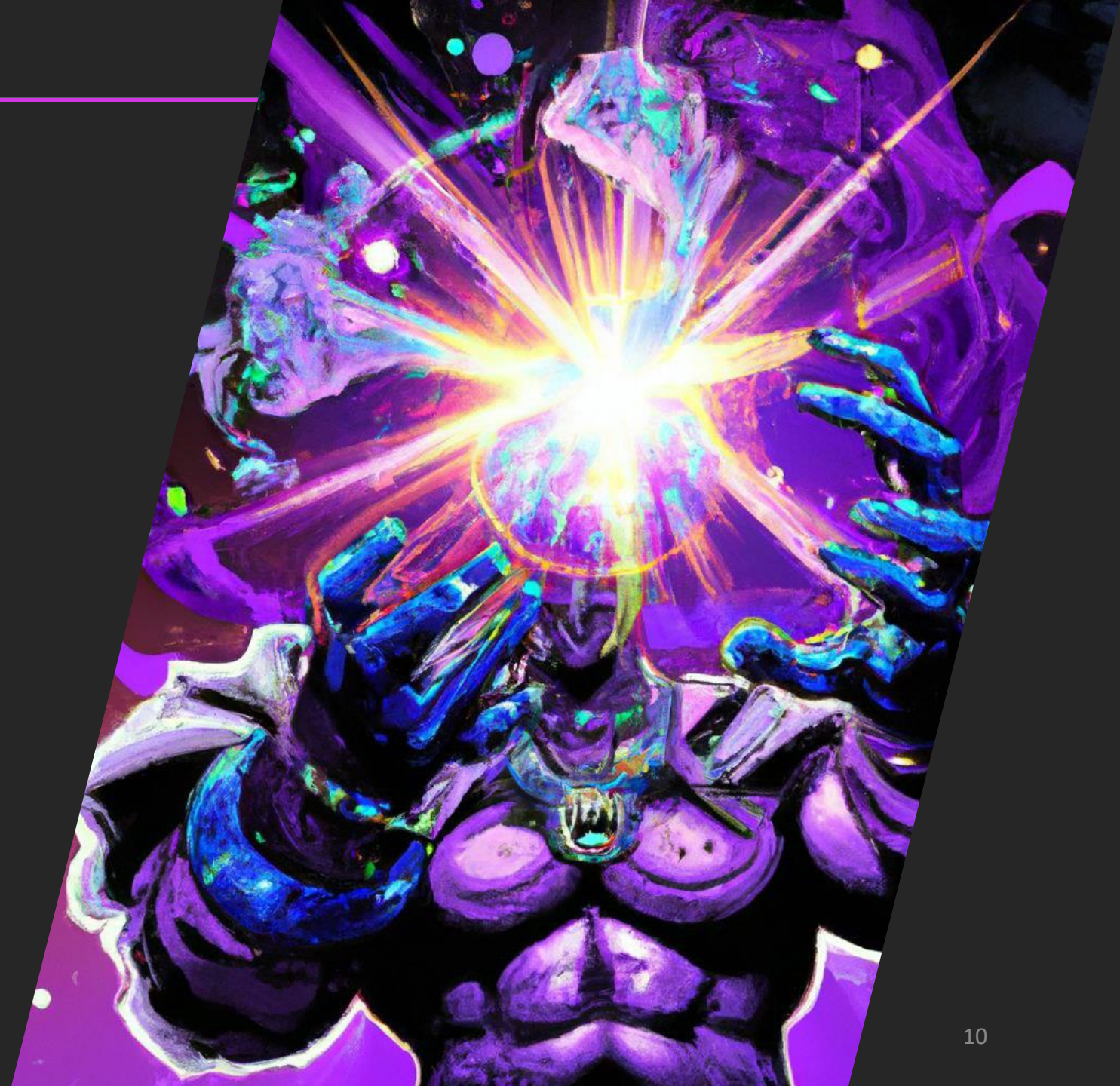
ZNN and QSR are both ZTS.

Can have different properties, e.g.

- fungible / non-fungible
- burnable / mintable
- utility / non-utility

Can be created in SYRIUS, the open source Zenon NoM wallet.

Can be used for tokenization and trustless, feeless transfer of any asset on NoM.





Pillar

- Consensus validators & momentum producers
- Vote on accelerator grants & ZIPs
- Require 15k ZNN + burn of linearly increasing QSR amount for every new Pillar. Now: 280k QSR



Delegator

- Allocate ZNN to Pillars to increase their weight and ability to produce momentums
- Receive a variable share of the Pillar's momentum & delegation rewards in return



Sentinel (to be implemented in Phase 1)

- Maintain the state of the dual-ledger and add PoW-links for transaction finality, preventing double spends & chain splits
- Scale the network to up to 100k TPS and form a public backbone of full nodes
- Require 5'000 ZNN + 50'000 QSR



Liquidity Provider

- Provide on-chain liquidity for cross-chain DEX trading
- Help secure the network by locking up ZNN in liquidity pools
- Earn trading fees and protocol emissions (Orbital rewards) to off-set IL risks



Staker

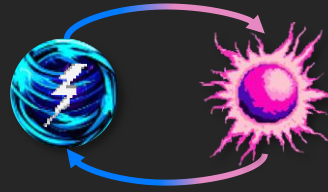
- Secure the network by locking up ZNN to generate QSR
- The longer the lockup period, the higher the QSR reward multiplier



Sentry (to be implemented in Phase 1)

- Protocol-level oracle (e.g. for trustless, programmatic cross-chain bridges)
- lightweight node that stores only the block-lattice data structure

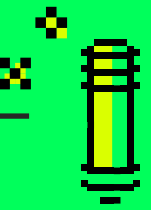
>plasma, the feeless fuel



Plasma fuels feeless transactions on NoM. Plasma is created by PoW or by fusing QSR. For now, the PoW is done by the user's device. More fused QSR = more plasma. When you make a tx plasma gets locked up. When the tx gets confirmed, you get the plasma back and you can unfuse it back to QSR. Both, tx send and receive requires plasma. Unlike gas, **plasma is never spent**. The amount of plasma needed varies with tx complexity. Plasma makes Zenon NoM fee- and spam-less.

How does plasma work?

- Assume you fuse enough QSR for 100 plasma & make 2 txs each using 40 plasma. The account has 20 plasma left.
- A pillar sees your 2 unconfirmed txs and gets elected to produce a momentum.
- Until the momentums are confirmed, 80 plasma are locked up and 20 plasma are available to use.
- If the pillar confirms 1 tx, you get the 40 plasma back and now have 60 plasma.
- If it confirms both txs, you get the 40 back from both txs and are back to the original 100.



Zenon incentivizes **progressive decentralization** through

Egalitarian xStakes Genesis

- The creation of the initial validator set was not skewed by unfair advantages.
- The initial validator set could not coordinate to collude the system and break network security through double spends or chain splits.
- The degree of decentralisation of the initial validator set was determined by nothing but the free market.

Dual-Coin Architecture ZNN | QSR

- QSR is rewarded to those securing the network by adding PoW (Sentinels), locking up funds (Staking), ensuring price stability (Liquidity). Since QSR enables feeless transactions, people who secure the network get more tx throughput.
- QSR also serves as collateral for network infrastructure. It must be burned in increasing amounts by those who want to govern (Pillars) and locked by Sentinels. People who secure the network get to run infrastructure.
- The problem with most PoS networks is that the validator set never really decentralizes. People who run them can just keep spinning up validators at zero additional cost. This causes the voting share per validator to remain constant, even if the number of validators increases.
- Zenon breaks this self-perpetuating oligarchy of single-token Proof-of-Stake networks by decoupling validator rewards and governance. By requiring a QSR burn for more pillars, but only rewarding pillars with ZNN, it means Pillars cant maintain the same voting share without adding additional network security in exchange for more QSR. Pillars have to choose between maximizing ZNN rewards through delegation, or acquiring QSR to run more Pillars. ZNN provides native yield, while QSR doesn't.

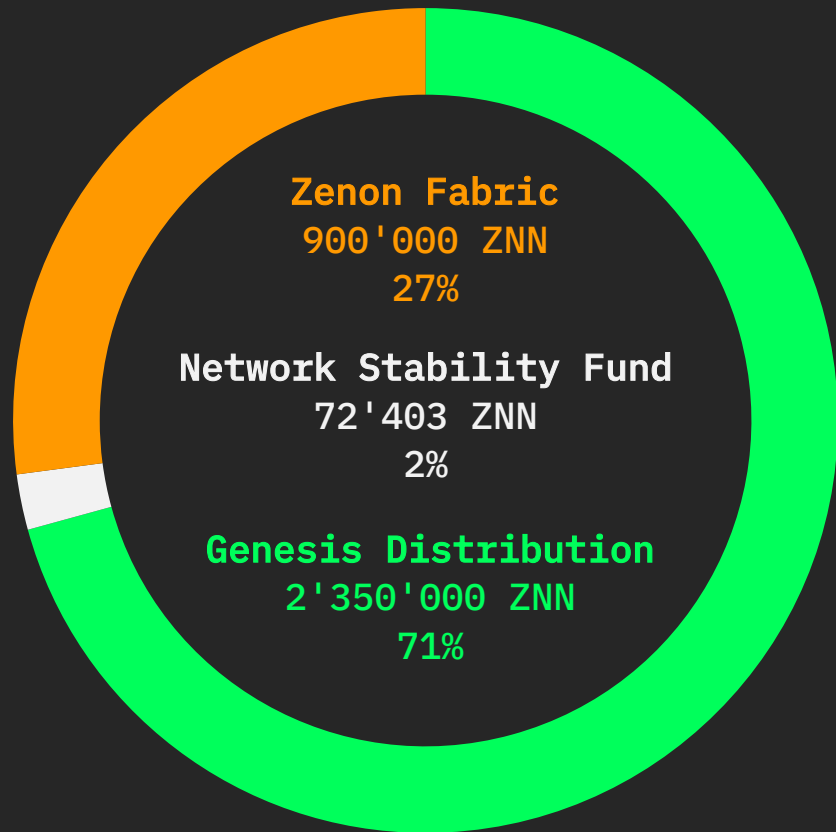


"I think when there is an unfair playing field, people don't want to build on it. You'd feel like someone else is benefitting from your efforts more than you.

This is why Zenon's xStakes and progressive decentralization are so important."



Prof. G



xStakes: BTC Bonding & Refund Algorithm

Almost all ZNN was “gifted” via a BTC<>ZNN bonding algorithm (“xStakes”) at the Genesis Distribution.

- Participants received 5k ZNN per 1 BTC.
- Running a validator node for 1.5 years resulted in a **refund of the bonded BTC** via monthly repayments.
- The **Network Stability Fund** to bootstrap the network was fully distributed to validators.
- The **Zenon Fabric Fund** consisted of locked ZNN that did not generate any rewards. They are now used to fund Accelerator Z, the Orbital Program and Vested Pillars.



To ensure the initial validator set was purely formed and naturally decentralized by nothing but the free market, the ZNN genesis distribution

- ... had no pre-sale / VC / insider / team allocations
- ... was publicly announced on Bitcointalk & Twitter
- ... was not advertised beyond word-of-mouth
- ... was fully anonymous
- ... did not give any special conditions to anyone
- ... refunded all BTC to committed validators
- ... did not limit how much ZNN anyone could acquire

>dual ledger consensus

→ = reference to a hash

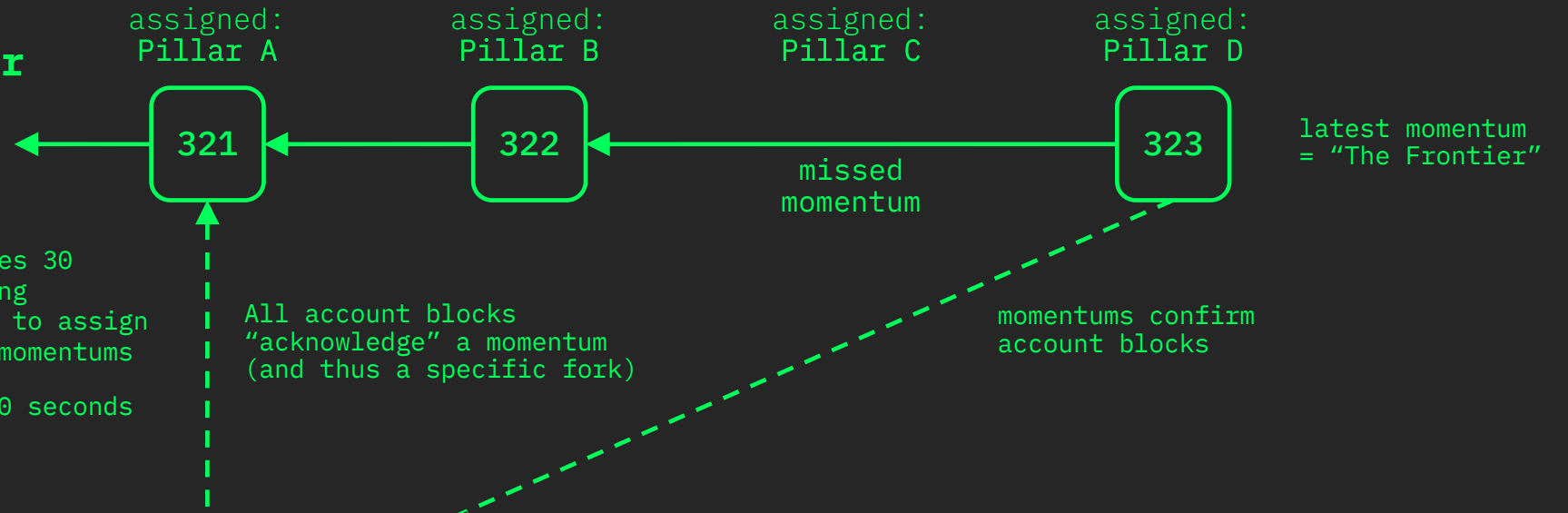
□ = signed message

Momentum Meta-Ledger

Epoch ≈ 1 day

Election cycle: every 5 minutes 30 unique Pillars are chosen using delegation based virtual vote to assign the producers of the next 30 momentums

Momentum assigned for every 10 seconds



Account Block-Lattice

Account X

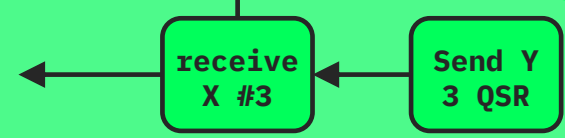
first account block = "The Genesis"



Account Y



Account Z



- Each account has its own chain and block height.
- All transactions are account blocks.
- Each account block is either a send or a receive.
- A send specifies the receiver, the token, and the amount.
- A receive references the hash of the send blocks.
- Transactions are not automatically received, the receiver must create and sign the receiving tx (until then the tx remains "unreceived").

Zenon NoM provides Smart Contract functionality on the protocol level.

Embedded Smart Contracts

- Are included in the node software itself
- Can directly access any object/data the node has
- Are directly upgradable via sporks

Existing embedded SCs on NoM:

- >Accelerator Z (votes / payouts)
- >Sentinel, Staking, Delegator, Liquidity Rewards

Future applications could be

- >Protocol-level Liquidity Pools / AMMs
- >NFT functionalities
- >...

VS

VM Runtime Smart Contracts

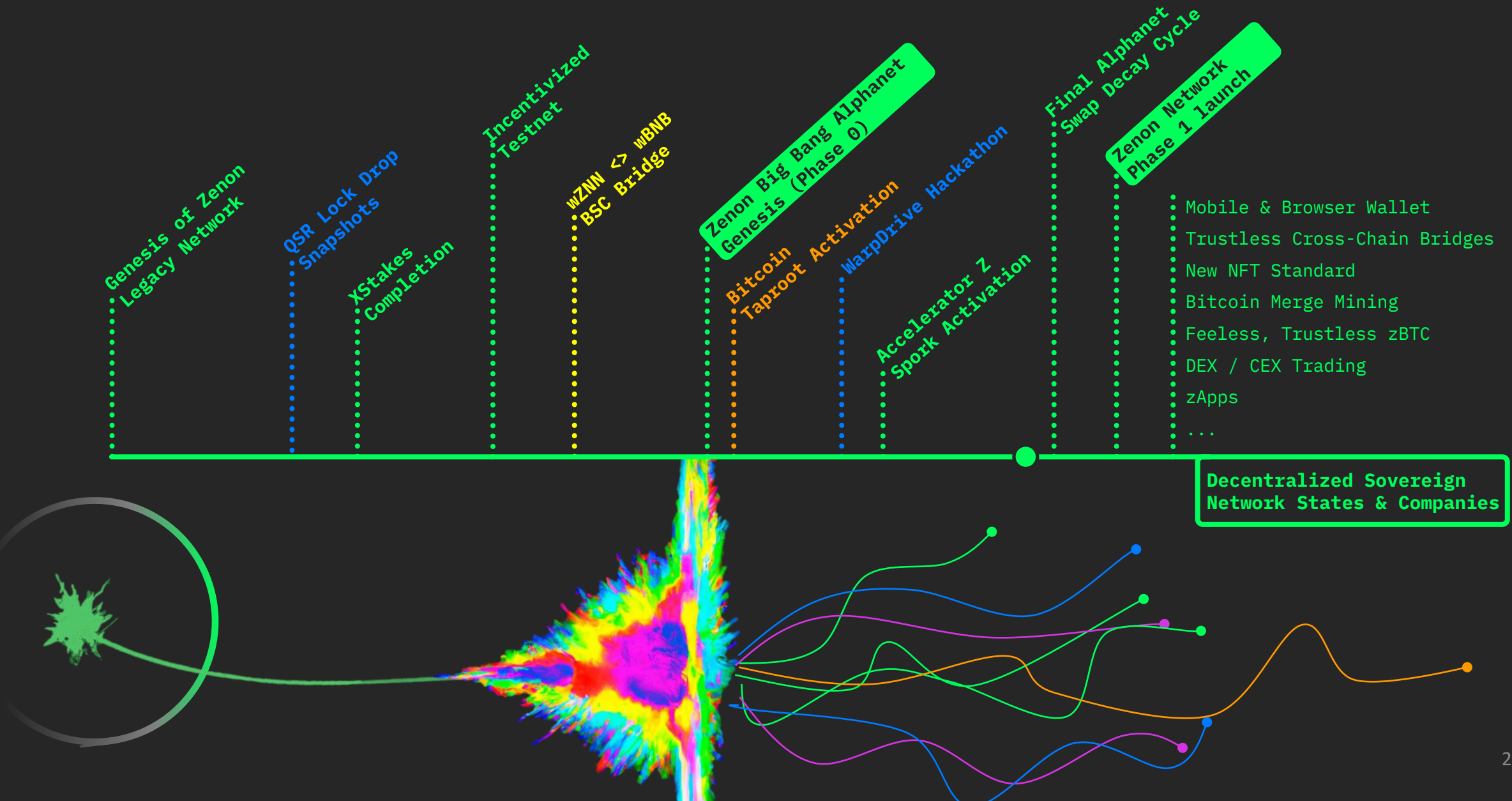
- Are loaded onto a virtual machine
- Offers an isolated interface to scoped ledger data
- Are immutable and must be replaced to make changes

Read more on
[Big Inches Club House](#)

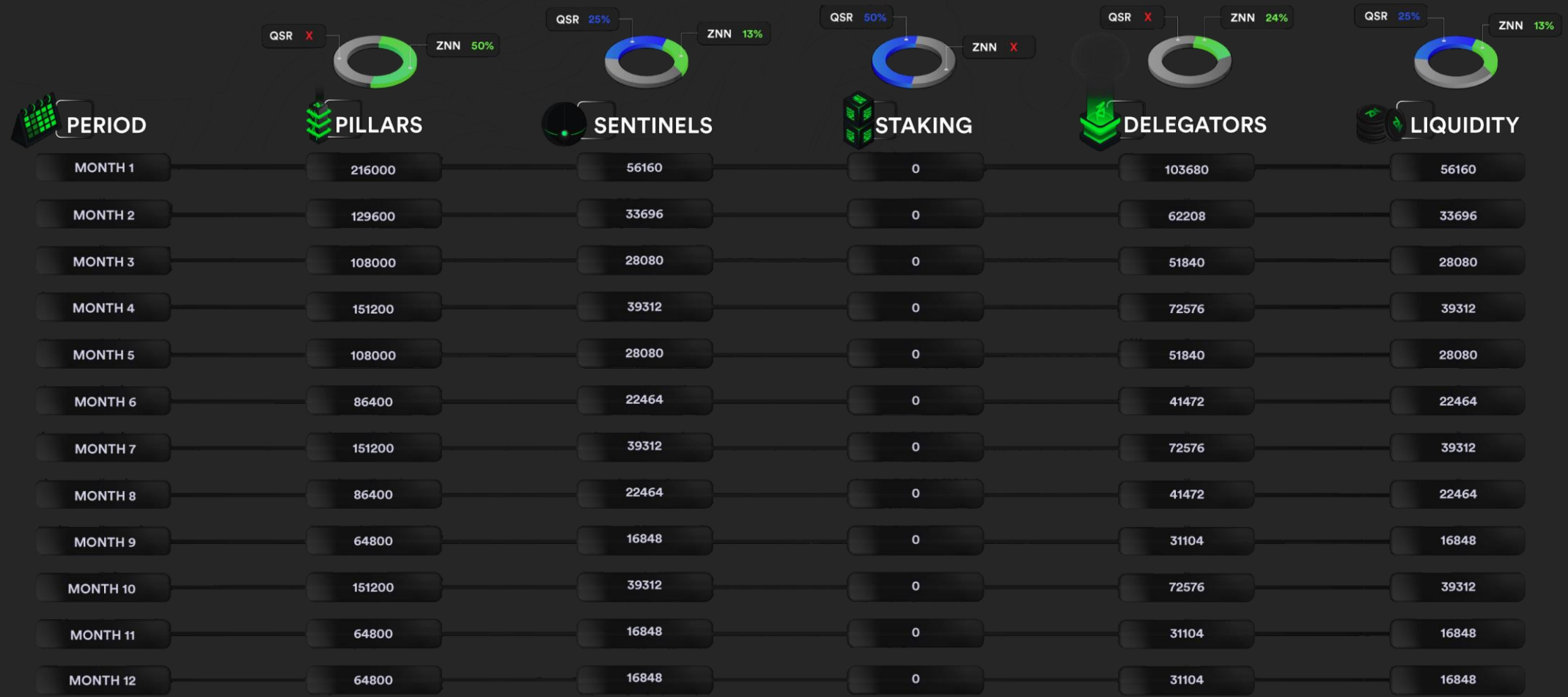
>ZIPs - zenon improvement proposals

ZIP Stage	Stage Type	Key Activities	Relevant For	ZIP Status
1. ZIP IDEA	Acceptance	<ul style="list-style-type: none"> Community members come up with an idea to improve Zenon and outline it in writing 	All ZIPs	Draft
2. PUBLIC DEBATE & REVISION	Acceptance	<ul style="list-style-type: none"> Author(s) publish an initial ZIP proposal & specification Author improves ZIP proposal based on community feedback 	All ZIPs	Draft / Withdrawn
3. OFFICIAL ZIP PROPOSAL	Acceptance	<ul style="list-style-type: none"> Sponsoring Pillar publishes formal Draft ZIP in its Git repo Community Pointer repo indexes the new Draft ZIP Author improves Draft ZIP based on community feedback <hr/> <ul style="list-style-type: none"> Informational / Implementation / Miscellaneous ZIPs are implemented and become "Active" / "Replaced" based on implicit consensus <i>Spork proposals continue with steps 4-8</i> 	All ZIPs	Draft / Rejected / Withdrawn / Final /
4. SPORK CREATION	Acceptance	<ul style="list-style-type: none"> Pillars allow the creation of a Spork through an Acceptance vote 	Sporks	Accepted / Withdrawn / Rejected
5. IMPLEMENTATION DISTRIBUTION	Distribution	<ul style="list-style-type: none"> The Spork reference implementation is published by the ZIP authors 	Sporks	Final / Active
6. COMMUNITY AUDIT	Distribution	<ul style="list-style-type: none"> The community audits the code 	Sporks	Final / Withdrawn
7. PILLARS UPGRADE NODES & VOTE	Upgrade	<ul style="list-style-type: none"> Pillars upgrade their node software and vote for activation through the AZ address 	Sporks	Final / Rejected
8. SPORK ACTIVATION	Activation	<ul style="list-style-type: none"> Spork activates once enough Pillars upgraded their nodes and voted to activate the Spork 	Sporks	Replaced / Active

Inspired by the BIP process, just more decentralized.



ZNN REWARDS

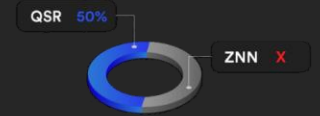


The dashboard features five donut charts at the top, each representing a reward category. The charts show the percentage split between QSR (blue) and ZNN (green). The categories and their respective splits are: Pillars (QSR X, ZNN 50%), Sentinels (QSR 25%, ZNN 13%), Staking (QSR 50%, ZNN X), Delegators (QSR X, ZNN 24%), and Liquidity (QSR 25%, ZNN 13%).

PERIOD	PILLARS	SENTINELS	STAKING	DELEGATORS	LIQUIDITY
MONTH 1	216000	56160	0	103680	56160
MONTH 2	129600	33696	0	62208	33696
MONTH 3	108000	28080	0	51840	28080
MONTH 4	151200	39312	0	72576	39312
MONTH 5	108000	28080	0	51840	28080
MONTH 6	86400	22464	0	41472	22464
MONTH 7	151200	39312	0	72576	39312
MONTH 8	86400	22464	0	41472	22464
MONTH 9	64800	16848	0	31104	16848
MONTH 10	151200	39312	0	72576	39312
MONTH 11	64800	16848	0	31104	16848
MONTH 12	64800	16848	0	31104	16848



QSR REWARDS



PERIOD



PILLARS



SENTINELS



STAKING



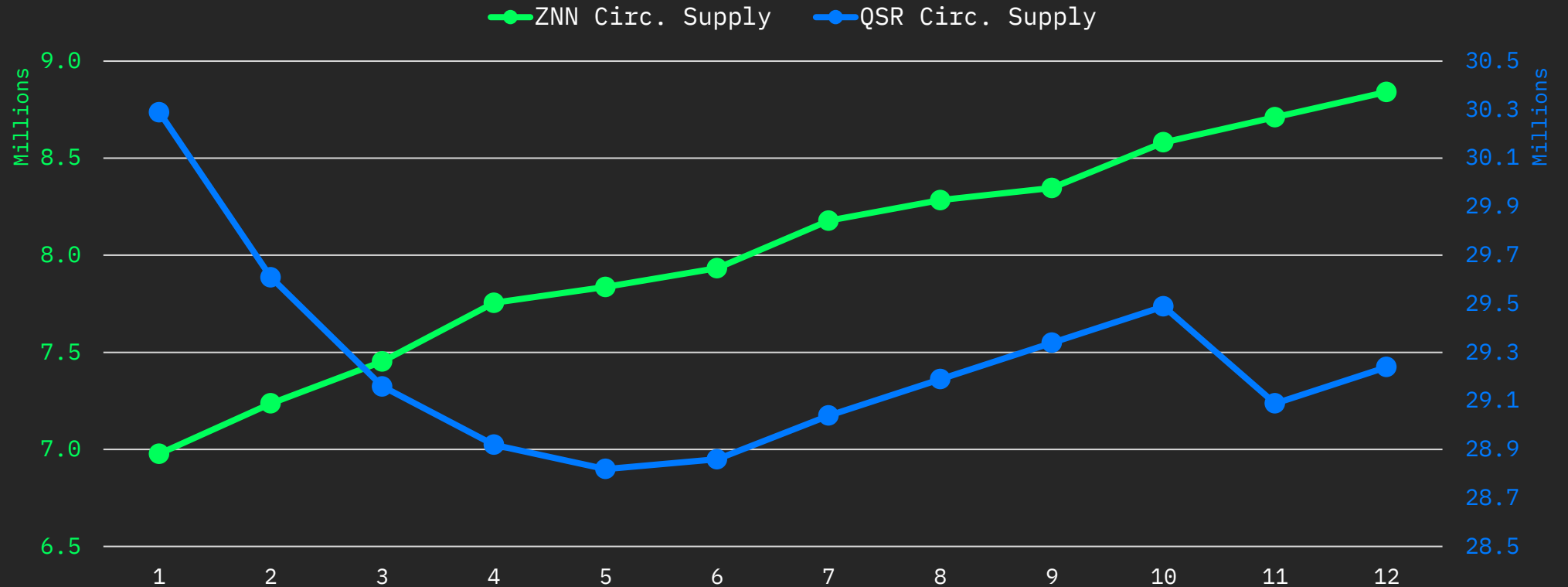
DELEGATORS



LIQUIDITY

PERIOD	PILLARS	SENTINELS	STAKING	DELEGATORS	LIQUIDITY
MONTH 1	0	150000	300000	0	150000
MONTH 2	0	150000	300000	0	150000
MONTH 3	0	150000	300000	0	150000
MONTH 4	0	150000	300000	0	150000
MONTH 5	0	125000	225000	0	125000
MONTH 6	0	125000	225000	0	125000
MONTH 7	0	125000	225000	0	125000
MONTH 8	0	37500	75000	0	37500
MONTH 9	0	37500	75000	0	37500
MONTH 10	0	37500	75000	0	37500
MONTH 11	0	37500	75000	0	37500
MONTH 12	0	37500	75000	0	37500

ZNN / QSR Alphanet Circulating Supply



ZNN Supply	6.51m	6.77m	6.98m	7.29m	7.50m	7.67m	7.98m	8.15m	8.28m	8.58m	8.71m	8.84m
ZNN Emissions	432k	259k	216k	302k	216k	173k	302k	173k	130k	302k	130k	130k
QSR Supply	25.34m	25.94m	26.54m	27.14m	27.59m	28.04m	28.49m	28.64m	28.79m	28.94m	29.09m	29.24m
QSR Emissions	600k	600k	600k	600k	450k	450k	450k	150k	150k	150k	150k	150k
Pillar Burns	5.83m	1.28m	1.05m	840k	550k	410k	270k	0	0	0	550k	

Alphanet 30 Day Epochs; 0 = Genesis



“Only a moron would spend BTC on a digital good.
But that doesn't mean that tx/value exchange shouldn't occur.”

x x x x

Prof. G

BTC

ENERGY CONSTRAINED VALUE

- Miner ability to convert energy to BTC is constrained by **physics**
- Value exchange in the digital economy rarely requires BTC to change hands
- Improving efficiency to harness energy creates **exponential future growth**. It makes sense to get paid for it in something that gets more valuable over time (= BTC)
- BTC is the **deflationary** commodity based on deflationary energy technology
- BTC = fair currency for energy constrained value

BTC = DIGITAL GOLD

ZNN

SOCIALLY ASSIGNED VALUE

- Pillar ability to print ZNN is assigned by delegators who believe in **good governance**
- All value exchange in the digital economy is almost entirely about assigned value
- Digital consumer goods (entertainment, art, services) create **time-limited value**. It doesn't make sense to pay for them in BTC which grows in value over time
- ZNN is the **disinflationary** tender for cyclically assigned value based on trust, belief & faith
- ZNN = fair currency for socially assigned value

ZNN = DIGITAL GOLD NOTES

>bitcoin pow recycling



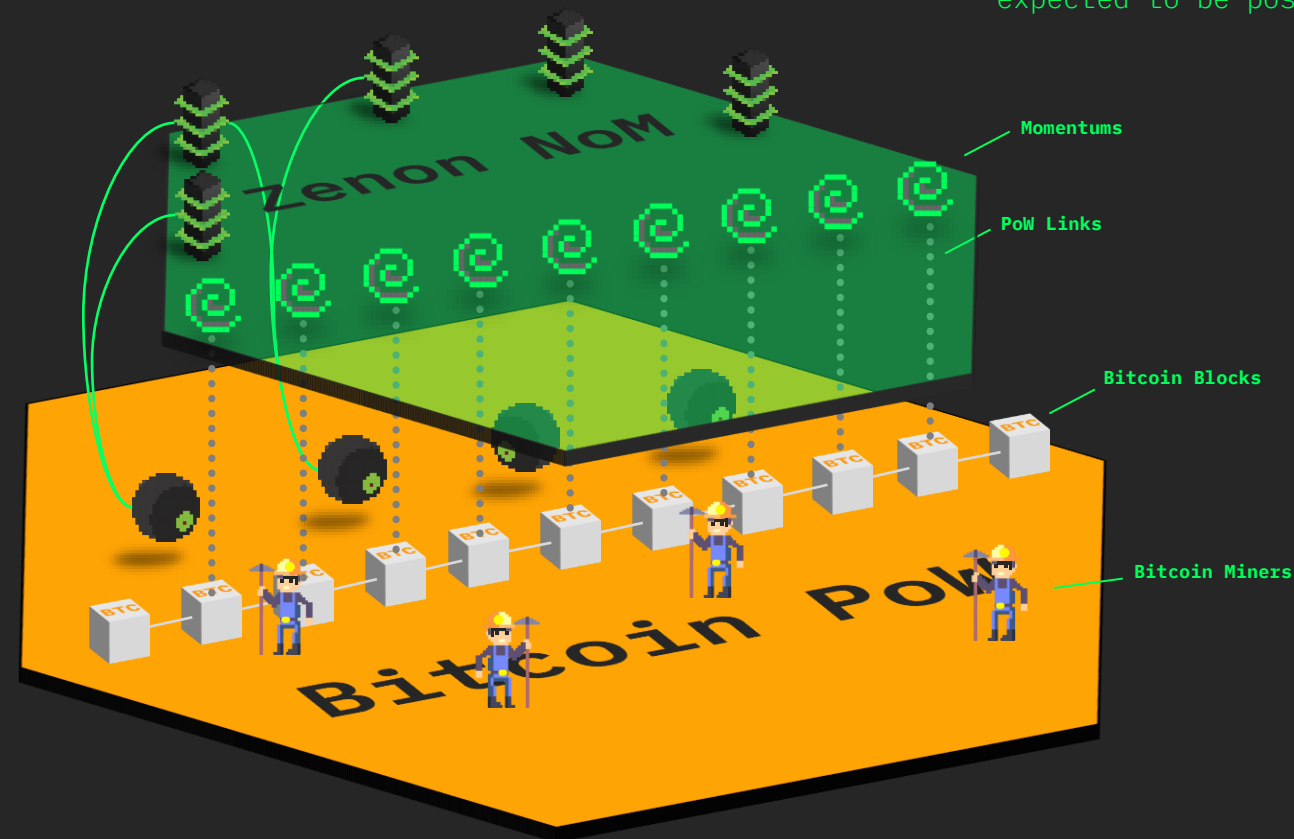
In NoM Phase 1, Sentinels are introduced. They are full nodes which create **PoW links** and strengthen the requirements for a tx to be valid by adding weight. This prevents chain splits and helps break ties if there is a double spend.

Multiple sentinels would add a PoW link to a tx and the tx would only be valid if it has enough PoW links.

When Sentinels are added, txs will likely not be sent directly to pillars. Instead, Sentinels will broadcast the PoW link and all nodes will update the frontier of account chains.

This way, Sentinels can provide a deterministic ordering mechanism.

In addition to using Bitcoin's PoW for tx finality on NoM, **recycling of Bitcoin PoW for merge mining of BTC and plasma for feeless transactions on NoM** is also expected to be possible.



ZENON NETWORK

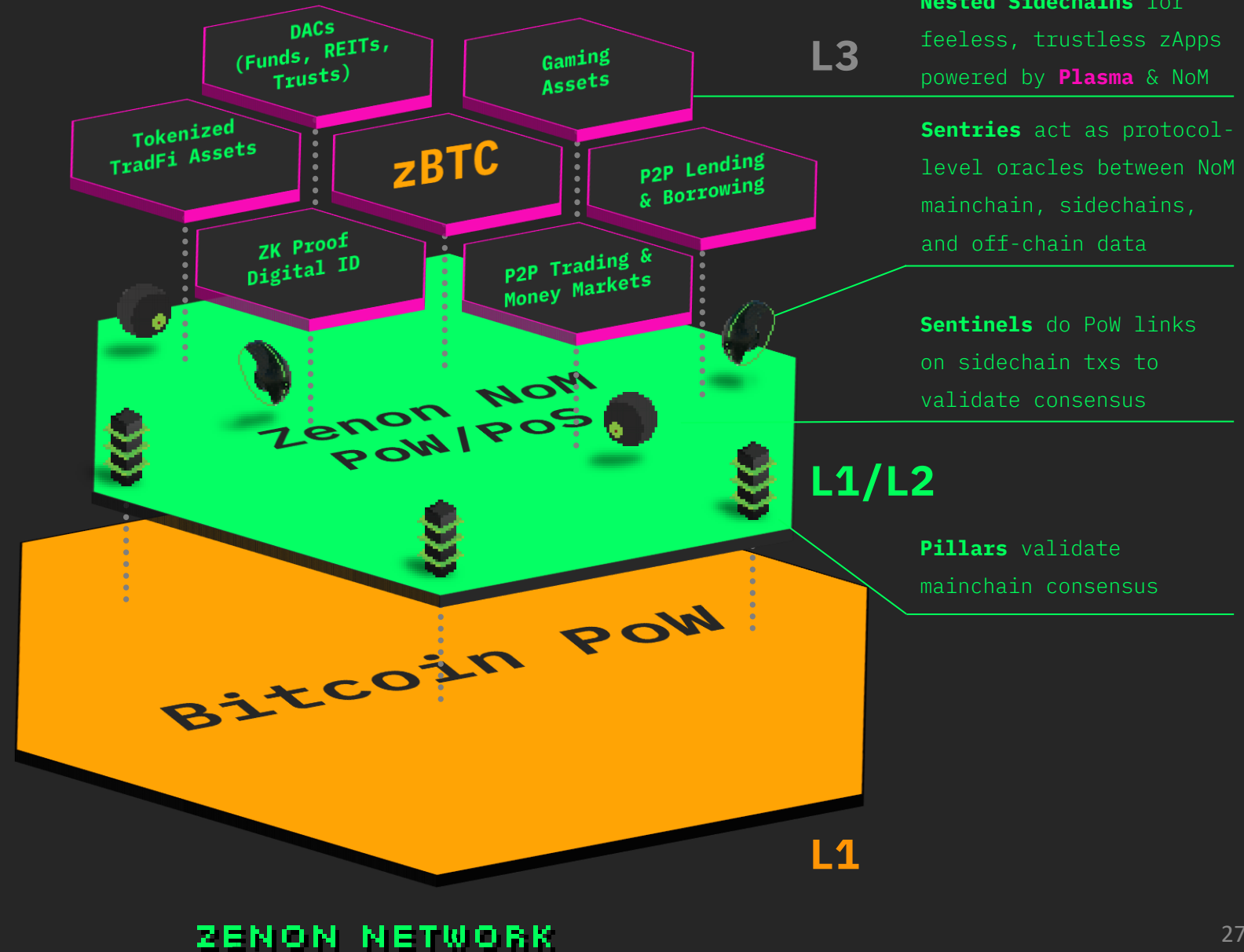
>layered scaling with trustless, feeless sidechains



Zenon Network has been designed from the ground up to support **layered scaling with trustless, feeless sidechains** (L3) on top of NoM (L1/L2) on top of Bitcoin (L1).

The key to layered scaling are interoperable, nested sidechains which keep use case specific on-chain data off the main chain and only use the latter for **consensus disputes**.

Thanks to Zenon's egalitarian launch and progressive decentralization incentives, using **Bitcoin's PoW as ultimate layer of adjudication** for consensus disputes creates a highly scalable, trustless DLT structure that makes the **blockchain trilemma redundant**.



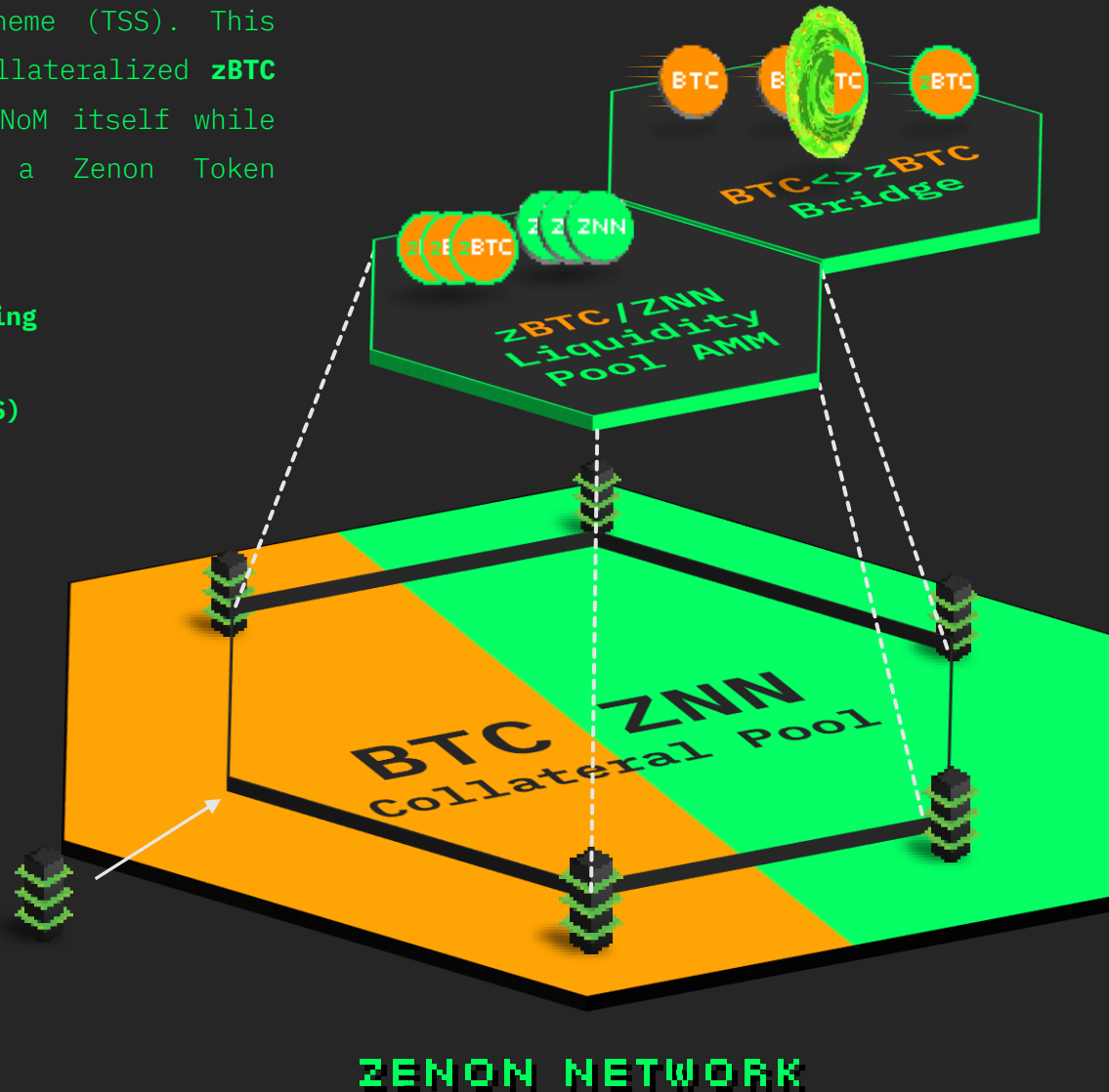
>zBTC - trustless, feeless, instant, privacy-enhancing



BTC Taproot enabled massive multisig, meaning that BTC can be custodied by all Zenon Pillars in a Threshold Signature Scheme (TSS). This allows the creation of overcollateralized **zBTC** that is as decentralized as NoM itself while bearing all properties of a Zenon Token Standard (ZTS) token:

- **Trustless**
- **Feeless**
- **Fungible**
- **Privacy-enhancing**
- **Near-instant**
- **(up to 100k TPS)**

Whenever the signatory set of the **BTC/ZNN Pillar TSS vault** changes, the collateral must be moved to a new address. This creates tx fees for moving the BTC. To maintain **(over-)collateralization** of zBTC by BTC, ZNN from liquidity emissions can be used to **buy zBTC and burn it**.



The bridge is necessary to convert BTC to zBTC and back, while the zBTC/ZNN liquidity pool offers trading pairs for zBTC.

Both, the zBTC/ZNN liquidity pool as well as the BTC<->zBTC bridge can be secured by Pillars.

Bridging creates tx fees on the BTC main chain. To ensure there is always more BTC than zBTC, zBTC can be burned with some ZNN from liquidity emissions or AMM trading fees (if any).



“Interoperability with Bitcoin can go beyond value transfer.
Every detail must be taken into account.”



Mr. Kaine




>accelerator z

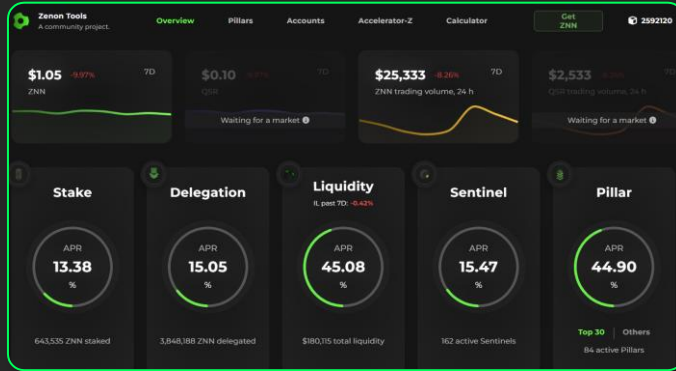
900k ZNN + 8.4m QSR in On-Chain Project Funding

AZ is a decentralized, next-gen funding powerhouse for Web3 innovation - entirely governed by the Zenon community through the SYRIUS wallet.

Zenon Accelerator from A to Z

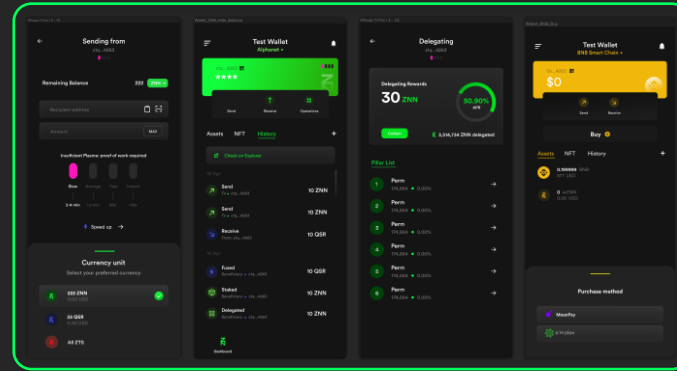
1. Get familiar with Zenon and Accelerator Z
 2. Pick a network need or propose one
 3. Study AZ application best practices
 4. Introduce yourself to the community & Pillars
 5. Write your proposal
 6. Submit it on-chain and promote it
 7. Get approved by Pillars
 - 8. Build, deliver, get paid!**
- 

>community funded projects



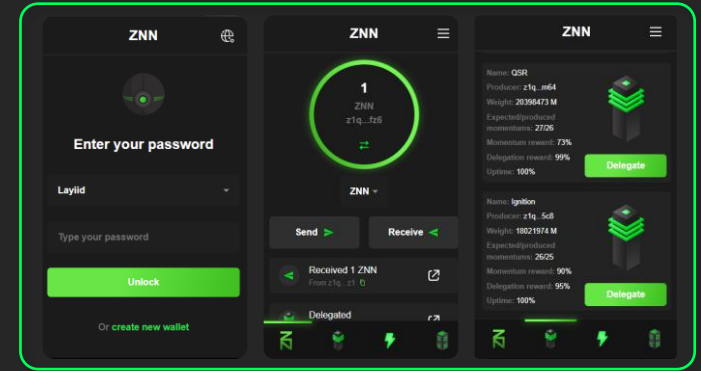
Zenon.Tools

by @vilkris



Mobile Wallet App

by @DrBlaze21



Syrius Browser Extension

by @dexZNNter

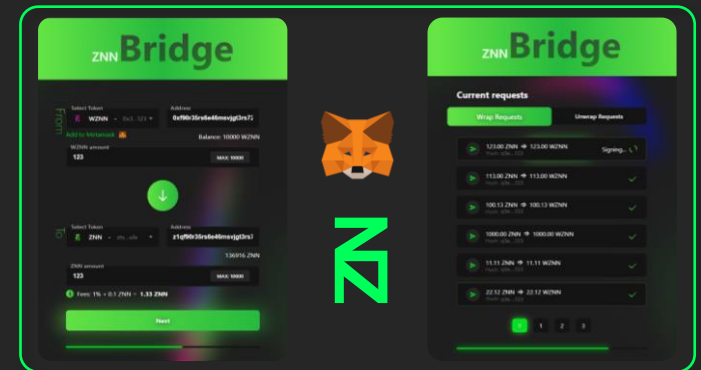
SDKs

JS/TS, Rust, Go, Java,
Kotlin, Python, C#

Software Development Kits

by various contributors

And many more...



Cross-Chain Bridge Web App

by @su_mamu

>to be funded

We are looking for builders to realize the following projects

- >hardware wallet support
- >smart contract runtime (zWASM)
- >SDK ports (C/C++, Swift, Common Lisp)
- >znd optimizations (IBD, tx processing, light node)
- >enhanced p2p layer using libp2p
- >NFT standard implementation
- >merge mining & BTC<>zBTC bridge
- >unikernel integrations
- >atomic swaps
- >frame.sh
- >DEX
- >...



>FAQ

>How to get ZNN

>[Buy wZNN and bridge it to ZNN](#)

>[OTC channel](#) (beware of scammers)

>How to get QSR

>No secondary market exists yet, try OTC

>How to run network infra and earn yield

>Download the [SYRIUS wallet](#) and run a Pillar, Sentinel, Stake, Delegate, or [LP on PCS](#)

>How to apply for an AZ grant

>[Follow these instructions](#)



**More questions?
Ask the community!**

TAPROOT

```
;BynQtpeUyWTXKGTTrGhdV2Q==;  
;tVMd3L1CKM4wFmyxEUUUV2bY;  
;4Fdzw1k=zzzzzzzzzzzzzzzzzzzz;  
      .:1zzzzzzzzz.  
      .:qqzzzzqqq,  
      ,;1zzzzqqq,  
      ,;1zzzzqqq,  
      ,;qzzzzz1qq,  
      ,vtv3f5aKY0jGQg1P9a1AGw==.  
      ,zzzzzzzzzzzzzzzzzzzzzzzzzzzzzz,  
      ,zzzzzzzzzzzzzzzzzzzzzzzzzzzzzz,  
      ,zzzzzq;.          1zzzz,  
      ,zzzzzzzzq,          1zzzz,  
      ,zzzzzzzzz1:          1zzzz,  
      ,zzzzq:1zzzzq;.      1zzzz,  
      ,zzzzq ,qzzzzz1, 1zzzz,  
      ,zzzzq .;qzzzzzq:1zzzz,  
      ,zzzzq ,qzzzzzzzzzz,  
      ,zzzzq .;qzzzzzzzz,
```

BLOCK
709632

“Never doubt you can make history. You already have.”

@zenon_network

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Extension & change requests: [@shazzamazzash](#) (Telegram).



Shazz